

REPRESENTATIVE PUBLICATIONS BY LOS ALAMOS STAFF ON OFFICE OF SCIENCE PROGRAMS IN 2006

BASICS ENERGY SCIENCES

- 1. 4f-5f heterotrimetallic complexes exhibiting electrochemical and magnetic communication**
Schelter, EJ; Veauthier, JM; Thompson, JD; Scott, BL; John, KD; Morris, DE; Kiplinger, JL
Source: JOURNAL OF THE AMERICAN CHEMICAL SOCIETY; FEB 22 2006; v.128, no.7, p.2198-2199
- 2. A model for damage caused by cluster implantation: Non-linear effect due to damage overlap.**
Lin Shao; Nastasi, M.; Xuemei Wang; Jiarui Liu; Wei-Kan Chu
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Jan. 2006; vol.242, no.1-2, p.503-5
- 3. Absorption cross sections and Auger recombination lifetimes in inverted core-shell nanocrystals: Implications for lasing performance**
Nanda, J.; Ivanov, SA; Htoon, H.; Bezel, I.; Piryatinski, A.; Tretiak, S.; Klimov, VI
Source: Journal of Applied Physics; Feb 1 2006; v.99, no.3
- 4. Actinide-mediated cyclization of 1,2,4,5-tetracyanobenzene: Synthesis and characterization of self-assembled trinuclear thorium and uranium macrocycles**
Kiplinger, JL; Pool, JA; Schelter, EJ; Thompson, JD; Scott, BL; Morris, DE
Source: ANGEWANDTE CHEMIE-INTERNATIONAL EDITION; 2006; v.45, no.13, p.2036-2041
- 5. Amplified spontaneous emission in semiconductor-nanocrystal/ synthetic-opal composites: Optical-gain enhancement via a photonic crystal pseudogap**
Maskaly, GR; Petruska, MA; Nanda, J; Bezel, IV; Schaller, RD; Htoon, H; Pietryga, JM; Klimov, VI
Source: Advanced Materials; Feb 3 2006; v.18, no.3, p.343-34
- 6. Angle-resolved photoemission study of dispersive and narrow-band 5f states in UAsSe**
Guziewicz, E; Durakiewicz, T; Oppeneer, PM; Joyce, JJ; Thompson, JD; Olson, CG; Butterfield, MT; Wojakowski, A; Moore, DP; Arko, AJ
Source: PHYSICAL REVIEW B; APR 2006; v.73, no.15, p.155119
- 7. Application of high energy ion beam for the control of boron diffusion.**
Lin Shao; Nastasi, M.; Thompson, PE; Chen, QY; Jiarui Liu; Wei-Kan Chu
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Jan. 2006; vol.242, no.1-2, p.670-2
- 8. Chemical bonding investigation of amorphous hydrogenated Si-N alloys deposited by plasma immersion ion processing**
Jacobsohn, LG; Schulze, RK; Daemen, LL; Afanasyev-Charkin, IV; Nastasi, M
Source: Thin Solid Films; 3 Jan. 2006; vol.494, no.1-2, p.219-22
- 9. Chemical short-range order in ion-beam-induced amorphous SiC: Irradiation temperature dependence**
Ishimaru, M; Bae, IT; Hirata, A; Hirotsu, Y; Valdez, JA; Sickafus, KE
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Jan. 2006; vol.242, no.1-2, p.473-5
- 10. A comparison of hybrid density functional theory with photoemission of surface oxides of delta-plutonium**
Butterfield, MT; Durakiewicz, T; Prodan, ID; Scuseria, GE; Guziewicz, E; Sordo, JA; Kudin, KN; Martin, RL; Joyce, JJ; Arko, AJ; et. al.
Source: SURFACE SCIENCE; APR 15 2006; v.600, no.8, p.1637-1640
- 11. Compressive deformation of in situ formed bulk metallic glass composites**
Clausen, B; Lee, SY; Ustundag, E; Kim, CP; Brown, DW; Bourke, MAM
Source: Scripta Materialia; February 2006; v.54, no.3, p.343-347
- 12. Copper deficiency in UCu_{5-x}Sn [x=0.37 (1)]**
Bobev, S; Bauer, ED; Sarrao, JL
Source: ACTA CRYSTALLOGRAPHICA SECTION E-STRUCTURE REPORTS ONLINE; APR 2006; v.62, pt.4, p.I106-I108

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13. **Dynamical electric and magnetic metamaterial response at terahertz frequencies.**
Padilla, WJ; Taylor, AJ; Highstrete, C; Lee, M; Averitt, RD
Source: Physical Review Letters; 17 March 2006; vol.96, no.10, p.107401/1-4
14. **The effects of thermal quenching on ion-beam-induced phase transformation detection by ion-beam-induced luminescence.**
Sickafus, KE; Gosnell, GE; Wetteland, CJ; Tesmer, JR; Hollander, MG; Cooke, DW; Afanasyev, IV
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Dec. 2005; vol.241, no.1-4, p.563-7
15. **Electronic structure of layered uranium compounds from photoemission spectroscopy**
Guziewicz, E; Durakiewicz, T; Olson, CG; Joyce, JJ; Butterfield, MT; Arko, AJ; Sarrao, JL; Wojakowski, A
Source: SURFACE SCIENCE; APR 15 2006; v.600, no.8, p.1632-1636
16. **Enhancing photocatalytic activity by using TiO₂-MgO core-shell-structured nanoparticles.**
Hyun Suk Jung; Jung-Kun Lee; Nastasi, M.; Jeong-Ryeol Kim; Sang-Wook Lee; Jin Young Kim; Jong-Sung Park; Kug Sun Hong; Hyunho Shin
Source: Applied Physics Letters; 2 Jan. 2006; vol.88, no.1, p.13107-1-3
17. **Evolution of the heavy fermion state in Ce₂IrIn₈**
Heffner, RH; Morris, GD; Bauer, ED; Sarrao, JL; Thompson, JD; MacLaughlin, DE; Shu, L
Source: Physica B: Condensed Matter; Mar 31 2006; v.374-375, p.184-187
18. **Existence and stability of lanthanide-main group element multiple bonds. New paradigms in the bonding of the 4f elements. A DFT study of Cp₂CeZ (Z = F⁺, O, NH, CH⁻, CH₂) and the ligand adduct Cp₂Ce(CH₂)(NH₃)**
Clark, DL; Gordon, JC; Hay, PJ; Poli, R
Source: Organometallics; Nov 7 2005; v.24, no.23, p.5747-5758
19. **Fabrication of silicon-on-SiO₂/diamondlike-carbon dual insulator using ion cutting and mitigation of self-heating effects**
Di, ZF; Chu, PK; Zhu, M; Fu, RKY; Luo, SH; Shao, L; Nastasi, M; Chen, P; Alford, TL; Mayer, JW; et. al.
Source: APPLIED PHYSICS LETTERS; APR 3 2006; v.88, no.14, p.142108
20. **Formation of a new dynamical mode in alpha -uranium observed by inelastic X-ray and neutron scattering.**
Manley, ME; Yethiraj, M; Sinn, H; Volz, HM; Alatas, A; Lashley, JC; Hults, WL; Lander, GH; Smith, JL
Source: Physical Review Letters; 31 March 2006; vol.96, no.12, p.125501/1-4
21. **Formation of hydrogen complexes in proton implanted silicon and their influence on the crystal damage**
Hochbauer, T; Misra, A; Nastasi, M; Mayer, JW; Ensinger, W
Source: Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms; January 2006; v.242, no.1-2, p.623-626
22. **Formation of nanoporous noble metal thin films by electrochemical dealloying of Pt_xSi_{1-x}**
Thorp, JC; Sieradzki, K; Tang, L; Crozier, PA; Misra, A; Nastasi, M; Mitlin, D; Picraux, ST
Source: APPLIED PHYSICS LETTERS; JAN 16 2006; v.88, no.3, p.033110
23. **Heavy ion irradiation-induced phase transformation in polycrystalline Dy₂O₃**
Tang, M; Lu, P; Valdez, JA; Sickafus, KE
Source: Philosophical Magazine; Apr 11 2006; v.86, no.11, p.1597-1613
24. **Hidden magnetism and quantum criticality in the heavy fermion superconductor CeRhIn₅**
Park, T; Ronning, F; Yuan, HQ; Salamon, MB; Movshovich, R; Sarrao, JL; Thompson, JD
Source: Nature; 2 March 2006; vol.440, no.7080, p.65-8
25. **High-strength sputter-deposited Cu foils with preferred orientation of nanoscale growth twins**
Zhang, X; Wang, H; Chen, XH; Lu, L; Lu, K; Hoagland, RG; Misra, A
Source: APPLIED PHYSICS LETTERS; APR 24 2006; v.88, no.17, p.173116
26. **H-induced platelet and crack formation in hydrogenated epitaxial Si/Si_{0.98}B_{0.02}/Si structures.**
Lin Shao; Yuan Lin; Swadener, JG; Lee, JK; Jia, QX; Wang, YQ; Nastasi, M.; Thompson, PE; Theodore, ND;

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- Alford, TL; et. al.
Source: Applied Physics Letters; 9 Jan. 2006; vol.88, no.2, p.21901-1-3
27. **Imaging nonlinear scatterers applying the time reversal mirror**
Ulrich, TJ; Johnson, PA; Sutin, A
Source: Journal of the Acoustical Society of America; March 2006; vol.119, no.3, p.1514-18
28. **In situ loading response of WC-Ni: Origins of toughness**
Paggett, JW; Krawitz, AD; Drake, EF; Bourke, MAM; Livescu, V; Claussen, B; Brown, DW
Source: International Journal of Refractory Metals & Hard Materials; Jan. 2006; vol.24, no.1-2, p.122-8
29. **Interplay of magnetism, structure and superconductivity in heavy-fermion systems CeMIn₅ and PuMGa₅**
Thompson, JD; Nicklas, M; Sidorov, VA; Bauer, ED; Movshovich, R; Curro, NJ; Sarrao, JL
Source: Journal of Alloys and Compounds; Feb 9 2006; v.408-412, p.16-20
30. **Investigation of the magnetic susceptibility of nanocomposites obtained in zero-field-cooled conditions**
Jacobsohn, LG; Hundley, MF; Thompson, JD; Dickerson, RM; Nastasi, M
Source: Journal of Vacuum Science & Technology B (Microelectronics and Nanometer Structures); Jan. 2006; vol.24, no.1, p.321-5
31. **Ion irradiation of porous silicon: The role of surface states**
Jacobsohn, LG; Bennett, BL; Cooke, DW; Muenchausen, RE; Nastasi, M
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Jan. 2006; vol.242, no.1-2, p.164-6
32. **Ion-cut of Si facilitated by interfacial defects of Si substrate/epitaxial layer grown by molecular-beam epitaxy.**
Lin Shao; Lee, JK; Hochbauer, T.; Nastasi, M.; Thompson, PE; Rusakova, I.; Seo, HW; Chen, QY; Liu, JR; Wei-Kan Chu
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Jan. 2006; vol.242, no.1-2, p.509-11
33. **Ion-irradiation-induced phase transformation in rare earth sesquioxides (Dy₂O₃, Er₂O₃, Lu₂O₃).**
Tang, M.; Lu, P.; Valdez, JA; Sickafus, KE
Source: Journal of Applied Physics; 15 March 2006; vol.99, no.6, p.63514-1-7
34. **Iron-rich post-perovskite and the origin of ultralow-velocity zones**
Mao, WL; Mao, HK; Sturhahn, W; Zhao, JY; Prakapenka, VB; Meng, Y; Shu, JF; Fei, YW; Hemley, RJ
Source: SCIENCE; APR 28 2006; v.312, no.5773, p.564-565
35. **Irreversible dynamics of the phase boundary in U(Ru_{0.96}Rh_{0.04})₂Si₂ and implications for ordering**
Silhanek, AV; Jaime, M; Harrison, N; Fanelli, VR; Batista, CD; Amitsuka, H; Nakatsuji, S; Balicas, L; Kim, KH; Fisk, Z; et. al.
Source: PHYSICAL REVIEW LETTERS; APR 7 2006; v.96, no.13, p.136401
36. **Issues in the coarse-graining of dislocation energetics and dynamics**
Rickman, JM; LeSar, R
Source: Scripta Materialia; March 2006; vol.54, no.5, p.735-9
37. **Limits for ordered magnetism in Pu from muon spin rotation spectroscopy**
Heffner, RH; Morris, GD; Fluss, MJ; Chung, B; McCall, S; MacLaughlin, DE; Shu, L; Ohishi, K; Bauer, ED; Sarrao, JL; et. al.
Source: PHYSICAL REVIEW B; MAR 2006; v.73, no.9, p.094453
38. **Load sharing in tungsten fiber reinforced Kanthal composites**
Clausen, B; Bourke, MAM; Brown, DW; Ustundag, E
Source: MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING; APR 15 2006; v.421, no.1-2, SI, p.9-14

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39. **Localized excitation in the hybridization gap in YbAl₃.**
Christianson, AD; Fanelli, VR; Lawrence, JM; Goremychkin, EA; Osborn, R; Bauer, ED; Sarrao, JL; Thompson, JD; Frost, CD; Zarestky, JL
Source: Physical Review Letters; 24 March 2006; vol.96, no.11, p.117206/1-4
40. **Lowering critical cooling rate for forming bulk metallic glass.**
Shen, TD; Schwarz, RB
Source: Applied Physics Letters; 27 Feb. 2006; vol.88, no.9, p.91903-1-3
41. **Low-temperature growth of crystalline GaN films using energetic neutral atomic-beam lithography/epitaxy.**
Mueller, AH; Akhadov, EA; Hoffbauer, MA
Source: Applied Physics Letters; 23 Jan. 2006; vol.88, no.4, p.41907-1-3
42. **Luminescent properties and reduced dimensional behavior of hydrothermally prepared Y₂SiO₅:Ce nanophosphors.**
Cooke, DW; Lee, JK; Bennett, BL; Groves, JR; Jacobsohn, LG; McKigney, EA; Muenchausen, RE; Nastasi, M; Sickafus, KE; Tang, M; et. al.
Source: Applied Physics Letters; 6 March 2006; vol.88, no.10, p.103108-1-3
43. **Material dynamics under extreme conditions of pressure and strain rate**
Remington, BA; Allen, P; Bringa, EM; Hawreliak, J; Ho, D; Lorenz, KT; Lorenzana, H; McNaney, JM; Meyers, MA; Pollaine, SW; et. al.
Source: MATERIALS SCIENCE AND TECHNOLOGY; APR 2006; v.22, no.4, p.474-488
44. **Micro-strains in cold rolled Cu-Nb nanolayered composites determined by X-ray line profile analysis**
Nyilas, K; Misra, A; Ungar, T
Source: Acta Materialia; February 2006; v.54, no.3, p.751-755
45. **Modeling energetics and noise in dislocation patterning.**
Thomson, R.; Koslowski, M.; LeSar, R.
Source: Physical Review B (Condensed Matter and Materials Physics); 1 Jan. 2006; vol.73, no.2, p.24104-1-7
46. **μ SR studies of the superconducting order parameter in PuCoGa₅**
Morris, GD; Heffner, RH; Bauer, ED; Morales, LA; Sarrao, JL; Fluss, MJ; MacLaughlin, DE; Shu, L; Anderson, JE
Source: PHYSICA B-CONDENSED MATTER; MAR 31 2006; v.374, p.180-183
47. **μ SR study of short-range charge order in YNiO₃ above the monoclinic-orthorhombic transition**
Garcia-Munoz, JL; Mortimer, R; Llobet, A; Alonso, JA; Martinez-Lope, MJ; Cottrell, SP
Source: PHYSICA B-CONDENSED MATTER; MAR 31 2006; v.374, p.87-90
48. **Neutron diffraction study of the deformation mechanisms of the uranium-7 wt.% niobium shape memory alloy**
Brown, DW; Bourke, MAM; Field, RD; Hults, WL; Teter, DF; Thoma, DJ; Vogel, SC
Source: MATERIALS SCIENCE AND ENGINEERING A-STRUCTURAL MATERIALS PROPERTIES MICROSTRUCTURE AND PROCESSING; APR 15 2006; v.421, no.1-2, SI, p.15-21
49. **Non-poissonian exciton populations in semiconductor Nanocrystals via carrier multiplication**
Schaller, Richard D.; Klimov, Victor I.
Source: Physical Review Letters; 2006; v.96, no.9, p.1-4
50. **On photo-induced phenomena in complex materials: Probing quasiparticle dynamics using infrared and far-infrared pulses**
Hilton, DJ; Prasankumar, RP; Trugman, SA; Taylor, AJ; Averitt, RD
51. **Orientation and lateral mobility of insoluble Tempo amphiphiles at the air/water interface**
Wu, DG; Malec, AD; Majewski, J; Majda, M
Source: Electrochimica Acta; Feb 15 2006; v.51, no.11, p.2237-2246

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52. **Pair distribution function and structure factor of spherical particles.**
Howell, RC; Proffen, T.; Conradson, SD
Source: Physical Review B (Condensed Matter and Materials Physics); 1 March 2006; vol.73, no.9, p.94107-1-7
53. **Pair distribution function and structure factor of spherical particles.**
Howell, RC; Proffen, T.; Conradson, SD
Source: Physical Review B (Condensed Matter and Materials Physics); 1 March 2006; vol.73, no.9, p.94107-1-7
54. **Photoexcited electron dynamics in Kondo insulators and heavy Fermions.**
Demsar, J; Thorsmølle, VK; Sarrao, JL; Taylor, AJ
Source: Physical Review Letters; 27 Jan. 2006; vol.96, no.3, p.037401/1-4
55. **Photoluminescence of He-implanted ZnO**
Hamby, DW; Lucca, DA; Lee, JK; Nastasi, M
Source: Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms; January 2006; v.242, no.1-2, p.663-666
56. **Possible fulde-ferrell-larkin-ovchinnikov inhomogeneous superconducting state in CeCoIn₅**
Movshovich, R; Bianchi, A; Capan, C; Pagliuso, PG; Sarrao, JL
Source: Pramana - Journal of Physics; January 2006; v.66, no.1, p.227-237
57. **Preface to the viewpoint set on: Statistical mechanics and coarse graining of dislocation behavior for continuum plasticity**
Dimiduk, DM; Koslowski, M; LeSar, R
Source: Scripta Materialia; March 2006; vol.54, no.5, p.701-4
58. **Pressure dependence of the Fulde-Ferrell-Larkin-Ovchinnikov state in CeCoIn₅.**
Miclea, CF; Nicklas, M; Parker, D; Maki, K; Sarrao, JL; Thompson, JD; Sparn, G; Steglich, F
Source: Physical Review Letters; 24 March 2006; vol.96, no.11, p.117001/1-4
59. **Pressure study of quantum criticality in CeCoIn₅.**
Ronning, F.; Capan, C.; Bauer, ED; Thompson, JD; Sarrao, JL; Movshovich, R.
Source: Physical Review B (Condensed Matter and Materials Physics); 1 Feb. 2006; vol.73, no.6, p.64519-1-4
60. **Seven excitons at a cost of one: Redefining the limits for conversion efficiency of photons into charge carriers**
Schaller, RD; Sykora, M; Pietryga, JM; Klimov, VI
Source: Nano Letters; March 2006; v.6, no.3, p.424-429
61. **Single-shot, interferometric, high-resolution, terahertz field diagnostic.**
Kim, KY; Yellampalle, B.; Rodriguez, G.; Averitt, RD; Taylor, AJ; Glowacki, JH
Source: Applied Physics Letters; 23 Jan. 2006; vol.88, no.4, p.41123-1-3
62. **Spin dynamics and magnon-phonon interactions in Nd_{0.6}Sr_{0.4}MnO₃**
Kirby, BJ; Rhyne, JJ; Kaiser, H; Kuwahara, H; Tokura, Y
Source: JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS; JUL 2006; v.302, no.1, p.237-243
63. **Structural and optical characterization of fluorinated hydrogenated silicon carbide films deposited by pulsed glow discharge**
Jacobsohn, LG; Franceschini, DF; Afanasyev-Charkin, IV; Cooke, DW; Daemen, LL; Averitt, RD; Nastasi, M.
Source: Surface and Coatings Technology; May 22 2006; v.200, no.20-21, p.6079-6082
64. **Superconductivity: PuCoGa₅ to diamond**
Thompson, JD; Ekimov, EA; Sidorov, VA; Bauer, ED; Morales, LA; Wastin, F; Sarrao, JL
Source: Journal of Physics and Chemistry of Solids; January/March 2006; v.67, no.1-3, p.557-561
65. **Temperatures near the interface between an ideal heat exchanger and a thermal buffer tube or pulse tube.**
Swift, GW; Matveev, KI; Backhaus, S.
Source: International Journal of Heat and Mass Transfer; March 2006; vol.49, no.5-6, p.868-78

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66. **Texture variation and its influence on the tensile behavior of a friction-stir processed magnesium alloy**
Woo, W; Choo, H; Brown, DW; Liaw, PK; Feng, Z
Source: Scripta Materialia; June 2006; v.54, no.11, p.1859-1864
67. **The energy dependence of excessive vacancies created by high energy Si⁺ ion implantation in Si.**
Lin Shao; Nastasi, M.; Thompson, PE; Rusakova, I.; Chen, QY; Jiarui Liu; Wei-Kan Chu
Source: Nuclear Instruments & Methods in Physics Research, Section B (Beam Interactions with Materials and Atoms); Jan. 2006; vol.242, no.1-2, p.506-8
68. **Thermodynamics of open two-phase systems with coherent interfaces: Application to metal-hydrogen systems**
Schwarz, RB; Khachatryan, AG
Source: Acta Materialia; Jan. 2006; vol.54, no.2, p.313-23
69. **Using Fermi choppers to shape the neutron pulse**
Peters, J; Champion, JDM; Zsigmond, G; Bordallo, HN; Mezei, F
Source: Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment; Feb 15 2006; v.557, no.2, p.580-584
70. **Vector magnetization depth profile of a Laves-phase exchange-coupled superlattice obtained using a combined approach of micromagnetic simulation and neutron reflectometry**
Fitzsimmons, MR; Park, S; Dumesnil, K; Dufour, C; Pynn, R; Borchers, JA; Rhyne, JJ; Mangin, P
Source: PHYSICAL REVIEW B; APR 2006; v.73, no.13, p.134413

BIOLOGICAL & ENVIRONMENTAL RESEARCH

71. **Automated printing technology as a new tool for liquid sample preparation for micro x-ray fluorescence (MXRF)**
Miller, TC; Hastings, EP; Havrilla, GJ
Source: X-RAY SPECTROMETRY; MAR-APR 2006; v.35, no.2, p.131-136
72. **Engineering and characterization of a superfolder green fluorescent protein**
Pedelacq, JD; Cabantous, S; Tran, T; Terwilliger, TC; Waldo, GS
Source: Nature Biotechnology; January 2006; v.24, no.1, p.79-88
73. **Enhanced exopolymer production and chromium stabilization in Pseudomonas putida unsaturated biofilms**
Priester, JH; Olson, SG; Webb, SM; Neu, MP; Hersman, LE; Holden, PA
Source: Applied and Environmental Microbiology; March 2006; v.72, no.3, p.1988-1996
74. **The dynamic balance between organic acids and circumneutral groundwater in a large boreal peat basin**
Siegel, DI; Glaser, PH; So, J; Janecky, DR
Source: Journal of Hydrology; Apr 15 2006; v.320, no.3-4, p.421-431
75. **Incorporating solid solutions in reactive transport equations using a kinetic discrete-composition approach**
Lichtner, PC; Carey, JW
Source: GEOCHIMICA ET COSMOCHIMICA ACTA; MAR 15 2006; v.70, no.6, p.1356-1378
76. **A molecular actinide-tellurium bond and comparison of bonding in [M-III{N(TePiPr₂)₂}₃] (M = U, La)**
Gaunt, AJ; Scott, BL; Neu, MP
Source: ANGEWANDTE CHEMIE-INTERNATIONAL EDITION; 2006; v.45, no.10, p.1638-1641
77. **Microbial biogeography: putting microorganisms on the map**
Martiny, JBH; Bohannan, BJM; Brown, JH; Colwell, RK; Fuhrman, JA; Green, JL; Horner-Devine, MC; Kane, M; Krumins, JA; Kuske, CR; et. al.
Source: Nature Reviews Microbiology; FEB 2006; v.4, no.2, p.102-112

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78. **Pathogenomic sequence analysis of *Bacillus cereus* and *Bacillus thuringiensis* isolates closely related to *Bacillus anthracis***
Han, CS; Xie, G; Challacombe, JF; Altherr, MR; Bhotika, SS; Bruce, D; Campbell, CS; Campbell, ML; Chen, J; Chertkov, O; et. al.
Source: JOURNAL OF BACTERIOLOGY; MAY 2006; v.188, no.9, p.3382-3390
79. **Pu(VI) hydrolysis: Further evidence for a dimeric plutonyl hydroxide and contrasts with U(VI) chemistry**
Reilly, SD; Neu, MP
Source: INORGANIC CHEMISTRY; FEB 20 2006; v.45, no.4, p.1839-1846
80. **Synthesis, capillary crystallization and preliminary joint X-ray and neutron crystallographic study of Z-DNA without polyamine at low pH**
Langan, P; Li, XM; Hanson, BL; Coates, L; Mustyakimov, M
Source: ACTA CRYSTALLOGRAPHICA SECTION F-STRUCTURAL BIOLOGY AND CRYSTALLIZATION COMMUNICATIONS; MAY 2006; v.62, pt.5, p.453-456
81. **Three-dimensional elemental imaging using a confocal X-ray fluorescence microscope**
Patterson, BM; Havrilla, GJ
Source: AMERICAN LABORATORY; APR 2006; v.38, no.8, p.15+
82. **X-ray structure of ammonia-cellulose I: New insights into the conversion of cellulose I to cellulose III**
Wada, M; Nishiyama, Y; Langan, P
Source: MACROMOLECULES; APR 18 2006; v.39, no.8, p.2947-2952

NUCLEAR PHYSICS

83. **Cross section measurements for neutron-induced reactions in Ti, Fe and Ni at several neutron energies ranging from 70.7 to 151.6 MeV**
Sisterson, JM; Chadwick, MB
Source: Nuclear Instruments and Methods in Physics Research, Section B: Beam Interactions with Materials and Atoms; April 2006; v.245, no.2, p.371-378
84. **Evaluation and propagation of the Pu-239 fission cross-section uncertainties using a Monte Carlo technique**
Kawano, T; Hanson, KM; Frankle, S; Talou, R; Chadwick, MB; Little, RC
Source: NUCLEAR SCIENCE AND ENGINEERING; MAY 2006; v.153, no.1, p.1-7
85. **J/psi production and nuclear effects for d+Au and p+p collisions at root S-NN=200 GeV**
Adler, SS; Afanasiev, S; Aidala, C; Ajitanand, NN; Akiba, Y; Al-Jamel, A; Alexander, J; Aoki, K; Aphecetche, L; Armendariz, R; et. al.
Source: PHYSICAL REVIEW LETTERS; JAN 13 2006; v.96, no.1, p.012304
86. **Measurement of identified pi {sup 0} and inclusive photon second-harmonic parameter v{sub 2} and implications for direct photon production in square root s{sub NN}=200 GeV Au+Au.**
Adler, SS; Afanasiev, S; Aidala, C; Ajitanand, NN; Akiba, Y; Alexander, J; Amirikas, R; Aphecetche, L; Aronson, SH; Averbeck, R; et. al.
87. **Measurement of the response of a Ga solar neutrino experiment to neutrinos from a Ar-37 source**
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